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09/889,137	07/12/2001	Andrew Robert Oakley	31229-173019	8041

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EXAMINER	
PESIN, BORIS M	

ART UNIT	PAPER NUMBER
2174	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/889,137	OAKLEY ET AL.	
	Examiner	Art Unit	
	BORIS PESIN	2174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☒ Claim(s) *1* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This communication is responsive to the amendment filed 10/25/2007. Claims 1-20 are pending in this application. Claims 1, 15, and 18 are independent claims. In the amendment filed 10/25/2007, claims 1, 15, and 18 were amended. This action is made Non-Final.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/25/2007 has been entered.

Claim Objections

Claim 1 is objected to because of the following informalities:

On line 5 of Claim 1, the Applicant added the language “interactive whiteboard display system.” However, this addition appears to make the claim grammatically incorrect.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 4, 5, 7, 10, 13, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa (US 6683628) in view of Schindler (US 6920614).

In regards to claim 1, Nakagawa teaches an interactive whiteboard display system comprising a projector (Figure 4, Element 3), a device onto which an image is projected from the projector (Figure 4, Element 1), computing means (Figure 4, Element 4 “Computer”), a pointing device (Figure 4, Element 1), in which the computing means is arranged to supply image information to the device onto which an image is projected (Figure 4, Element 3); and in which the display device is a communications hub of the display system arranged to receive control signals from the pointing device and/or the

plurality of remote signaling devices and arranged to transmit those signals to the computing means in order to control an image on the device onto which an image is projected (Figure 4, Element 4 "Computer", 41, 42, 43, 44, and 45).

Nakagawa does not teach a plurality of remote signaling devices in which the plurality of remote signaling device are operable to transmit signals to a receiver portion of the device onto which an image is projected, the device onto which an image is projected being arranged to supply the signals to the computing means, said signals being stored by the computing means for display. Schindler teaches remote signaling devices in which the plurality of remote signaling device are operable to transmit signals to a receiver portion of the device onto which an image is projected, the device onto which an image is projected being arranged to supply the signals to the computing means, said signals being stored by the computing means for display("*Apparatus for controlling the material displayed on a personal computer home entertainment system, comprising:* ***a plurality of remote control devices for providing command signals****; a personal computer further comprising: a processor; a main memory; a bus connecting the processor to the main memory; a display adapter coupled to the bus; a display driven by the display adapter; a circuit coupled to the bus for receiving signals from the plurality of remote control devices and decoding the signals to determine the commands, including cursor control signals, wherein the processor receives the cursor control information from the cursor control device and controls the position of a cursor on the display*" (Claim 30)).

Schindler further teaches that, "*While the system has been described in terms of a personal computer, it is easily modified to encompass a settop box version, where all the circuitry is integrated into one or two cards in a box designed to sit on top of a television having VGA input. In another version, all the circuitry is included inside of the television chassis.*" (Column 21, Lines 11-16). Thus Schindler teaches that the display device (the television) can be the communications hub that arranged to receive signals from a plurality of remote devices.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nakagawa with the teachings of Schindler and include a plurality of remote control devices with the motivation to provide the user with a plurality of remote control devices with the motivation to provide the user with an easier method of controlling a cursor on the screen and to provide the user(s) the ability to not stand right next to the screen as he would have to if he was only using a pointing device.

In regards to claim 4, Nakagawa-Schindler teaches an interactive display system, in which the plurality of remote signaling devices are remote control devices which are operable to transmit control signals to a receiver portion of the device onto which an image is projected, which control signals are supplied to the computing means and are operable to control the computing means and thus image information supplied to the device onto which an image is projected (Schindler Claim 30).

In regards to claim 5, Nakagawa-Schindler teaches an interactive display system, in which the display device includes position indication means for indicating the position

of a pointing device relative to a surface of the display device. (i.e. Nakagawa Figure 6, Element 31).

In regards to claim 7, Nakagawa-Schindler teaches an interactive display system as claimed in claim 1, in which the pointing device is operable to induce image control signals in the position indication means, which image control signals are operable to control the computing means and thus image information is displayed on the device onto which an image is projected (Nakagawa Figure 4, Element 4 “Computer”, 41, 42, 43, 44, and 45).

In regards to claim 10, Nakagawa-Schindler teaches an interactive display system, in which the device onto which an image is projected includes an output portion arranged to transmit signals from both the receiver portion and the position indication means to the computing means (Nakagawa Figure 4, Element 2, the receiver portion is the touch sensitive screen).

In regards to claim 13, Nakagawa-Schindler teaches an interactive display system, in which the plurality of remote control devices are operable to control the computing means in substantially the same manner as a keyboard and mouse combination (Nakagawa Figure 4, Elements 1 and 2 and Figure 11 and Column 4, Lines 26-34).

Claim 15 is similar in scope to claim 1; therefore it is rejected under similar rationale.

In regards to claim 16, Nakagawa-Schindler further teach a method wherein the signals from the plurality of remote signaling devices are independent of the location of

the remote signaling device relative to the device onto which an image is projected (See Schindler Column 5, Lines 5-27, RF).

In regards to claim 17, Nakagawa-Schindler teaches a method, in which the signals from plurality of remote signaling devices are transmitted in response to information displayed on the device onto which an image is projected (Nakagawa Figure 4, Elements 1 and 2).

Claim 18 is similar in scope to claim 1; therefore it is rejected under similar rationale.

In regards to claim 19, Nakagawa-Schindler teaches a remote signaling device for use with the interactive display system (Nakagawa Figure 1A, Element 24).

In regards to claim 20, Nakagawa-Schindler and Montlick further teach a display system wherein the wireless connection is one of infra red means or radio means. (See Schindler Column 5, Lines 5-27, RF).

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa-Schindler in view of Montlick (US 5561446).

In regards to claim 2, Nakagawa-Schindler teaches all the limitations of claim 1. Nakagawa-Schindler does not teach an interactive whiteboard display system in which the device onto which an image is projected uses a single communications link between it and the computing means, which link is arranged to convey signals both

from the pointing device and the plurality of remote signaling devices, to enable a most efficient transfer of data. Montlick teaches, "*One or more portable pen-based computers are provided with wireless communication capability for connecting with the central computer system through the wireless network.*" (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nakagawa-Schindler with the teachings of Montlick and include a single communications link with the motivation to provide for greater portability.

In regards to claim 3, Nakagawa-Schindler and Montlick teach all the limitations of claim 2. Nakagawa-Schindler and Montlick further teach an interactive display system in which the single link is a wireless connection ("One or more portable pen-based computers are provided with wireless communication capability for connecting with the central computer system through the wireless network." Montlick, Abstract).

In regards to claim 20, Nakagawa-Schindler and Montlick further teach a display system wherein the wireless connection is one of infra red means or radio means. (See Schindler Column 5, Lines 5-27, RF).

Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa-Schindler in view of Zurstadt (US 5583323).

In regards to claim 6, Nakagawa-Schindler teaches all the limitations of claim 1. Nakagawa-Schindler does not specifically teach an interactive display system which is operable to calibrate the location of an image on the device onto which an image is

projected relative to the device onto which an image is projected. Zurstadt teaches an interactive display system which is operable to calibrate the location of an image on the device onto which an image is projected relative to the device onto which an image is projected (See Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nakagawa-Schindler with the teachings of Zurstadt and include a calibration mechanism with the motivation to provide the user with a better and more accurate image projection.

Claims 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa-Schindler in view of Geaghan et al. (US 5790114).

In regards to claim 8, Nakagawa-Schindler teaches all the limitations of claim 1. Nakagawa-Schindler does not teach an interactive display system, in which the pointing device is arranged to take precedence over the plurality of remote signaling devices. Geaghan teaches, “Pen or Finger mode detects pen and finger contact, giving priority to pen contact when both are detected.” Column 7, Line 15). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nakagawa-Schindler with the teachings of Geaghan and include a method of giving priority to the pointing device over another device with the motivation to provide for easy control of who gets to write on the screen at a given time.

In regards to claim 12, Nakagawa-Schindler teaches all the limitations of claim 1. Nakagawa-Schindler does not teach an interactive display system, in which the device onto which an image is projected requests information from each remote signaling

device in turn, by polling. Geaghan teaches, "the driver employs polling rather than interrupts to determining if data is available at the serial port" Column 14, Line 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nakagawa-Schindler with the teachings of Geaghan and include a method for polling devices in order to obtain data in a desired manner with the motivation to provide for an orderly and easy method of obtaining data.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa-Schindler in view of Krumholz (US 4538993).

In regards to claim 9, Nakagawa-Schindler teaches all the limitations of claim 1. Nakagawa-Schindler does not teach an interactive display system in which the pointing device is operable to selectively enable plurality of remote signaling devices. Krumholz teaches that, "interrupt row enable the teacher to cut off reception of particular student computer outputs" Column 4, Line 11). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nakagawa-Schindler with the teachings of Krumholz and include a method to enable remote signaling devices with the motivation to have easy control of who gets control of the screen at a given time.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa-Schindler in view of Hassan et al. (US 5689562).

In regards to claim 11, Nakagawa-Schindler teaches all the limitations of claim 1. Nakagawa-Schindler does not teach an interactive display system, in which the plurality

of remote signaling devices are operable to transmit signals to the receiver portion only in response to a request signal from the device onto which an image is projected. Hassan teaches, "The image control unit 10 starts the image transmission process by sending an image data request to the image transmission unit 20." (Column 8, Line 14). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nakagawa-Schindler with the teachings of Hassan and system that transmits signals to the receiver portion only in response to a request with the motivation to provide for better control of signals passed around the system.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa-Schindler in view of Lin et al. (US 5528235).

In regards to claim 14, Nakagawa-Schindler teaches all the limitations of claim 1. Nakagawa-Schindler does not teach an interactive display system in which the system comprises one master control device which is a remote control device or a pointing device, and a plurality of subsidiary remote signaling devices. Lin teaches, "the present invention can be used as a control keypad for a variety of household appliances such as master remote control device for integrated audio-video entertainment, microwave oven, security alarm panel and the like" Column 8, Line 27). It is inherent in Lin's invention that numerous other remote signaling devices are present but only one that controls all of the devices. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nakagawa-Schindler with the teachings of Lin and include a master remote control with the motivation to provide for more control over the devices.

Response to Arguments

Applicant's arguments filed 9/25/2007 have been fully considered but they are not persuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Nakagawa is used to teach an interactive whiteboard system and Schindler is used to teach multiple remote controls. The Examiner concedes that there is no teaching of a whiteboard in Schindler (See Applicant's arguments on page 9), however Schindler was not relied upon to teach a whiteboard but rather multiple remote control devices in communication with a television screen (display device).

In response to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re*

Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one of ordinary skill in the art, an engineer, to combine Nakagawa's whiteboard with the multiple remote controls of Schindler with the motivation to provide users with an easier method of controlling a cursor on the screen and to provide the user(s) the ability to not stand right next to the screen as he would have to if he was only using a pointing device. For instance, it would be useful to use remote controls to interact with the whiteboard rather then the pointing device since it is easier to sit rather than stand. Also, multiple remotes could be useful to control different media projected on the whiteboard, where the user is able to annotate the information displayed. In other words, there can be a second user who is operating different media (DVD VHS, etc..) via the remote controls and one person who is giving a presentation regarding the media (or with the help of the media), and he is using the pointing device to draw on the screen concurrently.

In response to the Applicant's arguments that the claimed remote devices are for use by multiple audience members (See Pages 10-11), the Examiner points out that the claim language simple recites remote controls, there is not a specific number of users who must use these remote controls, thus one user satisfies the claim. Furthermore, there is no requirement in the claim language that the users use both the pointing device and the remote controls (See Page 11). The claim only requires that the whiteboard be capable (operable) to receive and transmit both signals, not that both are used.

In regards to the Applicant's argument that Schindler does not teach a device onto which an image is projected as the receiver of the remote signals, the Examiner respectfully disagrees. While the Examiner concedes that Schindler teaches that a personal computer receives signals from the remote controls, Schindler also teaches, "*In another version, all the circuitry is included inside of the television chassis.*" (Column 21, Lines 11-16). If the computer circuitry were to be included with the television, then the device onto which the image were to be projected (television) would also be the receiver of the remote signals.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BORIS PESIN whose telephone number is (571)272-4070. The examiner can normally be reached on Monday-Friday except every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Boris Pesin/
Art Unit 2174